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OIL AND GAS DEVELOPMENTS IN PENNSYLVANIA IN 1950

By
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OIL AND GAS DEVELOPMENTS IN PENNSYLVANIA IN 1950

BY

CHAS. R. FETTKE[1]

ABSTRACT

Exploratory drilling in the shallow-sand territory of western Pennsylvania (Upper Devonian or higher) during 1950 led to the discovery of only one small new gas field. No new oil pool was discovered. The total number of shallow wells drilled was 14.5 per cent less than in 1949. The Bradford field accounted for 75 per cent of Pennsylvania's oil production during 1950. The average daily oil production in the State in 1950 was 32,395 barrels, as compared with 31,347 barrels in 1949, an increase of 3 per cent.

Thirty-four new wells were completed to the deeper formations (Onondaga or deeper), as compared with 27 in 1949. Of these, two were drilled for gas storage purposes. Of the remainder, 19 were gas wells and 13 were dry holes.

The outstanding event of 1950 was the discovery of another major Oriskany sand gas pool in north-central Pennsylvania early in the year. A wildcat well on the Leidy dome in Clinton County in north-central Pennsylvania encountered an open-flow of gas estimated at 15 million cubic feet per day in the top of the Oriskany sandstone. The initial reservoir pressure was 4,200 pounds per square inch. By the end of 1950, twelve producing wells and three dry holes had been completed, and 40 wells were drilling. The pool was producing at the rate of about 150,000,000 cubic feet of gas per day. Oriskany tests on five other structures were underway at the end of the year in Cameron, Clinton, and Lycoming Counties.

INTRODUCTION

Drilling activity in the shallow-sand territory of western Pennsylvania (Upper Devonian or higher) continued to decline during 1950. In all, 1,724 wells were completed, as compared with 2,017 in 1949. Of these, 391 were gas wells, 31 were oil wells, and 129 were dry holes. Fifty-one were drilled for gas storage and 1,122 were drilled in connection with secondary-recovery oil operations. Thirty-four deep wells (Middle Devonian or deeper) were completed in 1950. Nineteen of these were gas wells, two were drilled for gas storage, and thirteen were dry holes. A classification of the wells, exclusive of those drilled for gas storage and secondary-recovery purposes, is given in Table 1. Oil and gas production is shown in Table 2. New field discoveries are listed in Table 3, and the more important dry exploratory tests in Table 4.

SHALLOW-SAND DEVELOPMENTS

Shallow-sand well completions in western Pennsylvania, exclusive of those drilled in connection with underground gas storage and secondary-recovery oil operations, are shown in Table 5. During 1950, 551 such wells were drilled, of which 71 per cent were gas wells, 6 per cent were oil wells, and 23 per cent were dry holes. The 391 new gas wells had a total initial open-flow capacity of 59,139,000 cubic feet per day, as com-

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pared with the total initial open-flow capacity of 93,405,000 cubic feet of the 430 new gas wells completed in 1949. The 31 new oil wells had a total initial production of 191 barrels per day, as compared with the total initial production of 260 barrels of the 53 new oil wells completed in 1949. The results obtained in 1950 by deepening 32 shallow-sand wells are shown in Table 6.

One new shallow-sand gas field, probably small, was discovered in Pennsylvania in 1950 in Conemaugh Township, Indiana County. The best results in shallow-sand gas development were obtained in Washington County. Three wells, averaging 1,728 feet in depth, were drilled for underground gas storage in Allegheny County; 3, averaging 1,806 feet, in Clarion County; 3, averaging 1,688 feet, in Greene County; 6, averaging 1,894 feet, in Jefferson County; 15, averaging 2,625 feet, in Washington County; and 21, averaging 1,862 feet, in Westmoreland County.

The average daily oil production of Pennsylvania in 1950 was 32,395 barrels, as compared with 31,347 barrels in 1949, an increase of 3 per cent. In the Bradford oil field, which includes the Bradford, Guffey, and Burning Well pools, 1,044 new wells were drilled, about half of which were water-intake wells, as compared with 1,200 in 1949, a decrease of 13 per cent. Oil production in this field, 86 per cent of whose area is in Pennsylvania, increased from a daily average of 26,804 in 1949 to 27,329 in 1950, or 2 per cent. Seventy-five per cent of Pennsylvania's oil production came from the Bradford field in 1950.

In the Kane-Clarendon area of southwestern McKean County and eastern Warren County, 98 wells were completed in 1950, mostly in connection with water-flooding projects in the Clarendon pool of east-central Warren County. In the Venango district of northern Venango and adjacent parts of eastern Forest and southwestern Warren Counties, 69 wells were drilled in 1950, as compared with 82 in 1949, a decrease of 16 per cent. Of these, 12 were air-intake wells and 57 were oil wells. Oil production in the middle and southwestern districts of Pennsylvania increased from a daily average of 6,673 barrels in 1949 to 7,199 barrels in 1950, or 8 per cent.

The price of crude oil in the northern and middle districts rose from $3.54 per barrel at the beginning of the year to $4.25 on December 9. In the southwestern district, it advanced from $3.11 per barrel to $3.82 during the same period. Somewhat improved market conditions and the higher prices, no doubt, accounted for the increase in production. On the other hand, exploration and new development work in connection with secondary-recovery operations lagged. No new oil fields or pools were discovered in Pennsylvania during 1950.

Deep-sand Developments

The results of deep drilling in north-central and western Pennsylvania are summarized in Table 7. The locations of the wells are shown on the map in Plate 1. Of the 34 wells completed, 19 were gas wells, 2 were drilled for gas storage, and 13 were dry holes.

The outstanding event of 1950 was the discovery of another major Oriskany sand gas pool in north-central Pennsylvania early in the year. A wildcat well, Dorsey Calhoun No. 1, on the Leidy dome along the Wellsboro anticline in Clinton County, encountered an open-flow of gas estimated at 15 million cubic feet per day in the top of the Oriskany sandstone. The initial reservoir pressure was 4,200 pounds per square inch, which is abnormally high for the depth of 5,660 feet at which the sand occurs. By the end of 1950, twelve producing wells and three dry holes had been completed, and 40 wells were drilling. The 12 producing wells had initial open-flow capacities ranging from 480,000 to 61,000,000 cubic feet per day, the average being 17,000,000 cubic feet. The pool was producing at the rate of about 150,000,000 cubic feet of gas per day. The proven area extended about 4.2 miles along the axis of the anticline and had a width of one mile. There is every indication that this will be extended considerably. What is probably the largest gas well ever completed in the Appalachian province was drilled in on February 2, 1951. Its initial open-flow capacity was estimated to have been in excess of 250,000,000 cubic feet per day.

Seven additional gas wells and four dry holes were completed at the southwest end of the East Fork-Wharton Oriskany sand pool in southern Potter County during 1950. The pool now extends for a distance of 9.1 miles along the Marshland anticline and has a maximum width of about one mile. At the end of 1950, it had produced approximately 21.5 billion cubic feet of gas, and the reservoir pressure had dropped from a maximum of 3,600 pounds per square inch to about 1,000 pounds.

The East Fork-Wharton and Leidy developments have focused attention on the belt between the area in which the Oriskany sandstone is absent and the outcrop (pl. 1). Tests on five other structures were underway at the end of the year in Cameron, Clinton, and Lycoming counties.

The Harry F. White No. 1 and the Guy Green No. 1 wells in Crawford County represent two more unsuccessful Oriskany tests in northwestern Pennsylvania. The White well encountered no sand at the Oriskany horizon, and the Green well, salt water in the sand. Drilling difficulties prevented the completion of the White well through the Albion Series of the Lower Silurian.

The objective of the N. E. Murphy No. 1 well and of the Indian Creek Coal and Coke Company's No. 3 well in Fayette County was to explore the possible occurrence of a fault block east of the North and South Summit pools that might prove productive. Both tests were unsuccessful.

The Harry Benauer No. 1 well in Delmar Township, Tioga County, is the sixth unsuccessful attempt to discover gas in the Oriskany sandstone under the prominent dome along the Wellsboro anticline in the vicinity of Wellsboro.

The Camilla F. Griffin No. 4 well in Derry Township, Westmoreland County, verified information previously obtained in two other wells drilled east of it, namely, that the structure becomes increasingly complex with depth. The surface structure at the site of the well, as mapped on the Loyalhanna limestone of the Mississippian System, consists of an elongated dome along the axis of the Chestnut Ridge anticline which is modified by a reverse fault of slight displacement on the east flank. A well-sample record prepared by Robert E. Bayles, of the geological staff of the Peoples Natural Gas Company, indicates that the well passed through an overturned anticline after reaching the Onondaga, and that the Oriskany sandstone was encountered three times in the interval between 7,392 and 9,200 feet.[2]

Two Cambro-Ordovician tests were underway in Pennsylvania at th end of the year, both east of the Allegheny Front. One is located o the Schellsburg dome in Bedford County in south-central Pennsylvani It starts in the Helderberg limestone of the Lower Devonian. The othe is located on the Nippenose dome near the northern end of the Nittan arch in Lycoming County, north-central Pennsylvania, and starts i limestone that may be as old as Beekmantown or Lower Ordovician.

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[2] Because of space limitations in table 7, only the first and third penetrations of the Oriskan are listed in the summarized record of this well.

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BLE 1. *Well completion summary for Pennsylvania, 1950*

	OIL	GAS	DRY	TOTAL	PER CENT SUCCESSFUL
oratory Tests		12	18	30	40
lopment Wells*	31	398	124	553	78
Total	31	410	142	583	76

Does not include wells drilled in connection with underground storage of gas or secondary-ery of oil.

TABLE 2. *Oil and gas production in Pennsylvania, 1950*

	PRODUCTION		
	1949	1950	CUMULATIVE TOTAL TO 12-31-5
Oil	11,442,000 *barrels*	11,825,000 *barrels*	[illegible],125,[illegible] *barrels*
Gas	70,000,000 *M. cu. ft.*	75,000,000 *M. cu. ft.*	[illegible] *M. cu. ft.*

TABLE 3. *Important oil and gas discoveries in Pennsylvania, 1950*

AP DEX BER	OPERATOR	WELL NAME	WELL LOCATION	BASIS FOR LOCATION	COMPLETION DATE	TOTAL DEPTH OF WELL *(feet)*	PRODUCING DEPTH *(feet)*	INITIAL PRODUCTION *(bbls/day—Oil)* *(Mcf/day—Gas)*	PRODUCING FORMATION *(name and age)*	DEEPEST FORMATION TESTED *(name and age)*	NAME OF FIELD OR POOL	EXPLORATION CLASSIFICATION	REMARKS
	Leidy Prospecting Co.	Dorsey Calhoun 1	Leidy Twp., Clinton Co.	Non-technical	1-8-50	5,661	5,661	15,000 MCF est.	Oriskany Lower Devonian	Oriskany Lower Devonian	Leidy	New field	Opened new Oriskany sand field

TABLE 4. *Important dry exploratory tests in Pennsylvania, 1950*

IAP DEX MBER	OPERATOR	WELL NAME	WELL LOCATION	EXPLORATORY CLASSIFICATION	BASIS FOR LOCATION	COMPLETION DATE	TOTAL DEPTH *(feet)*	DEEPEST FORMATION *(name and age)*	REMARKS
7	Godfrey L. Cabot, Inc.	J. C. Foley 1	Leidy Twp., Clinton Co.	Outpost	Unknown	10-14-50	6,542	Oriskany	Salt water in Oriskany. Aided in defining limits of production on N. W. flank of Leidy dome.
12	Fairman & Miller	E. Summerson 1	Leidy Twp., Clinton Co.	Outpost	Unknown	10-3-50	5,889	Oriskany	Salt water in Oriskany. Aided in defining limits of production on S. E. flank of Leidy dome.
33	Wm. E. Snee, et al.	Harry Benauer 1	Delmar Twp., Tioga Co.	New field	Seismic	2-24-50	5,683	Oriskany	Sixth unsuccessful Oriskany sand test on prominent dome along Wellsboro anticline.
34	Peoples Nat. Gas Co.	Camilla Giffin 4	Derry Twp., Westmoreland Co.	New field	Subsurface Geology	6-5-50	9,200	Oriskany	Encountered unusually complicated structure at Oriskany horizon. Drilled through overturned fold.

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TABLE 5. *Shallow-sand well completions in Pennsylvania, 1950*

COUNTY	COMPLETIONS		GAS			OIL			DRY	
	NUMBER OF WELLS	AVERAGE TOTAL DEPTH *(feet)*	NUMBER OF WELLS	AVERAGE INITIAL OPEN-FLOW *(M. cu. ft. per day)*	AVERAGE TOTAL DEPTH *(feet)*	NUMBER OF WELLS	AVERAGE INITIAL PRODUCTION *(barrels per day)*	AVERAGE TOTAL DEPTH *(feet)*	NUMBER OF WELLS	AVERAGE TOTAL DEPTH *(feet)*
Allegheny	18	2,470	10	192	2,420	2	2.5	2,142	6	2,663
Armstrong	88	2,731	72	81	2,719	—	—	—	16	2,598
Beaver	4	1,814	—	—	—	—	—	—	4	1,814
Butler	55	1,894	25	70	2,302	19	5.5	1,522	11	1,618
Cambria	1	4,058	1	18	4,058	—	—	—	—	—
Clarion	48	2,160	38	46	2,256	—	—	—	10	1,795
Clearfield	7	2,707	7	95	2,707	—	—	—	—	—
Elk	23	2,358	18	87	2,249	—	—	—	5	2,750
Fayette	17	2,542	6	165	2,903	1	2.0	3,702	10	2,209
Forest	8	2,412	6	52	2,481	—	—	—	2	2,205
Greene	13	2,845	11	310	2,778	—	—	—	2	3,215
Indiana	34	3,251	25	107	3,235	—	—	—	9	3,406
Jefferson	52	2,971	38	59	3,026	—	—	—	14	2,728
McKean	54	2,161	39	55	2,124	2	2.0	2,200	13	2,265
Potter	9	1,800	5	140	1,800	2	2.0	1,800	2	1,800
Venango	2	1,965	2	12	1,965	—	—	—	—	—
Warren	1	1,976	1	5	1,976	—	—	—	—	—
Washington	71	2,494	50	436	2,341	5	14.0	2,941	16	2,830
Westmoreland	46	3,200	37	282	3,200	—	—	—	9	3,200
Total	551	2,551	391	151	2,601	31	6.1	1,923	129	2,544

* *Does not include wells drilled in connection with underground gas storage or secondary-recovery oil operations.*

Table 6. *Shallow-sand wells deepened, 1950*

COUNTY	TOTAL		GAS			OIL			DRY	
	Number of Wells	Average Amount Deepened (*feet*)	Number of Wells	Average Initial Open-Flow (*M. cu. ft. per day*)	Average Amount Deepened (*feet*)	Number of Wells	Average Initial Production (*barrels per day*)	Average Amount Deepened (*feet*)	Number of Wells	Average Amount Deepened (*feet*)
Allegheny	1	1,455	—	—	—	—	—	—	1	1,455
Armstrong	17	1,199	14	48	1,396	—	—	—	3	280
Butler	4	428	3	62	389	—	—	—	1	545
Clarion	1	1,777	1	22	1,777	—	—	—	2	579
Greene	5	931	3	52	1,166	—	—	—	—	—
Washington	3	206	1	67	199	1	2	166	1	253
Westmoreland	1	1,864	1	49	1,864	—	—	—	—	—
Total	32	1,015	23	50	1,219	1	2	166	8	532

Table 7(1

COUNTY	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Clinton
MAP NUMBER	1	2	3	4	5	6	7	8	9
NAME OF WELL	Dorsey Calhoun 1	Dorsey Calhoun 2	Jesse Calhoun 1	Jesse Calhoun 2	Earl Connell 1	Ralph W. Dougherty 1	J.C Foley 1	Harry M. Ludy 1	J.C. M^cCoy 1
OPERATOR	Leidy Prospecting	Leidy Prospecting	Godfrey L. Cabot Inc.	Godfrey L. Cabot Inc.	New York State Nat. Gas	New York State Nat. Gas	Godfrey L. Cabot Inc.	W. Roeder & H. White	Noyly Development
TOWNSHIP	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Leidy
LATITUDE	0.65 mi. S 41° 25'	0.45 mi. S. 41° 25'	1.44 mi. S. 41° 25'	1.45 mi. S. 41° 25'	0.74 mi. S. 41° 25'	0.97 mi. N. 41° 25'	1.99 mi. S. 41° 30'	0.10 mi. S 41° 25'	0.75 mi. S 41° 25'
LONGITUDE	0.17 mi. W. 77° 55'	0.16 mi. E. 77° 55'	0.75 mi W. 77° 55'	0.19 mi W. 77° 55'	0.53 mi. W 77° 55'	1.69 mi. W. 77° 50'	1.20 mi. W 77° 50'	0.54 mi W 77° 55'	0.39 mi W. 77° 55'
DATE COMPLETED	1-8-50	6-16-50	7-3-50	12-7-50	10-11-50	8-3-50	10-14-50	8-15-50	9-29-50
ELEVATION	926	1494	1054	861	939	1479	1338	902	937
BEREA-CORRY									
MURRYSVILLE									
TULLY	4840-	5386-5481	4936-5051	4833-4952	4881-4990	5272-5382	5670-5769	5123-	4852-
ONONDAGA	5635-5660	6164-6172	5787-5804	5636-	5671-	6066-6085	6519-6533	5904-5925	5651-
ORISKANY	5660- Gas at 5661	6172- Gas	5804- Gas 5805	5658-5678 Gas 5659	5696- Gas 5696	6085- Gas 6086	6533- Salt water 6540-6542	5925- Gas	5676- Gas 5677
SALINA									
LOCKPORT									
ALBION RED MEDINA (GRIMSBY)									
WHITE MEDINA (WHIRLPOOL)									
QUEENSTON									
TOTAL DEPTH	5661	6172	5805	5687	5697	6087	6542	5925	5677
DEEPEST FORMATION TESTED	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany
RESULT	1.OF 15,000 MCF est. R.P. 4200 psi in Oriskany	1.OF 30,000 MCF R.P. 3860 psi	1.OF 8740 MCF R.P. 4150 psi in 15 hrs.	1.OF 480 MCF. RP 4075 psi in 24 hrs	1.O.F 18,500 MCF R.P. 3900 psi in 24 hrs.	1.OF 61,000 MCF R.P. 4100 psi in 48 hrs.	Salt water in Oriskany 6540-6542 Rose 900 feet in one hour	1.OF 3020 MCF R.P. 3950 psi. in 48 hrs.	1.OF 16,500 MCF R.P. 3975 psi. in 24 hrs.

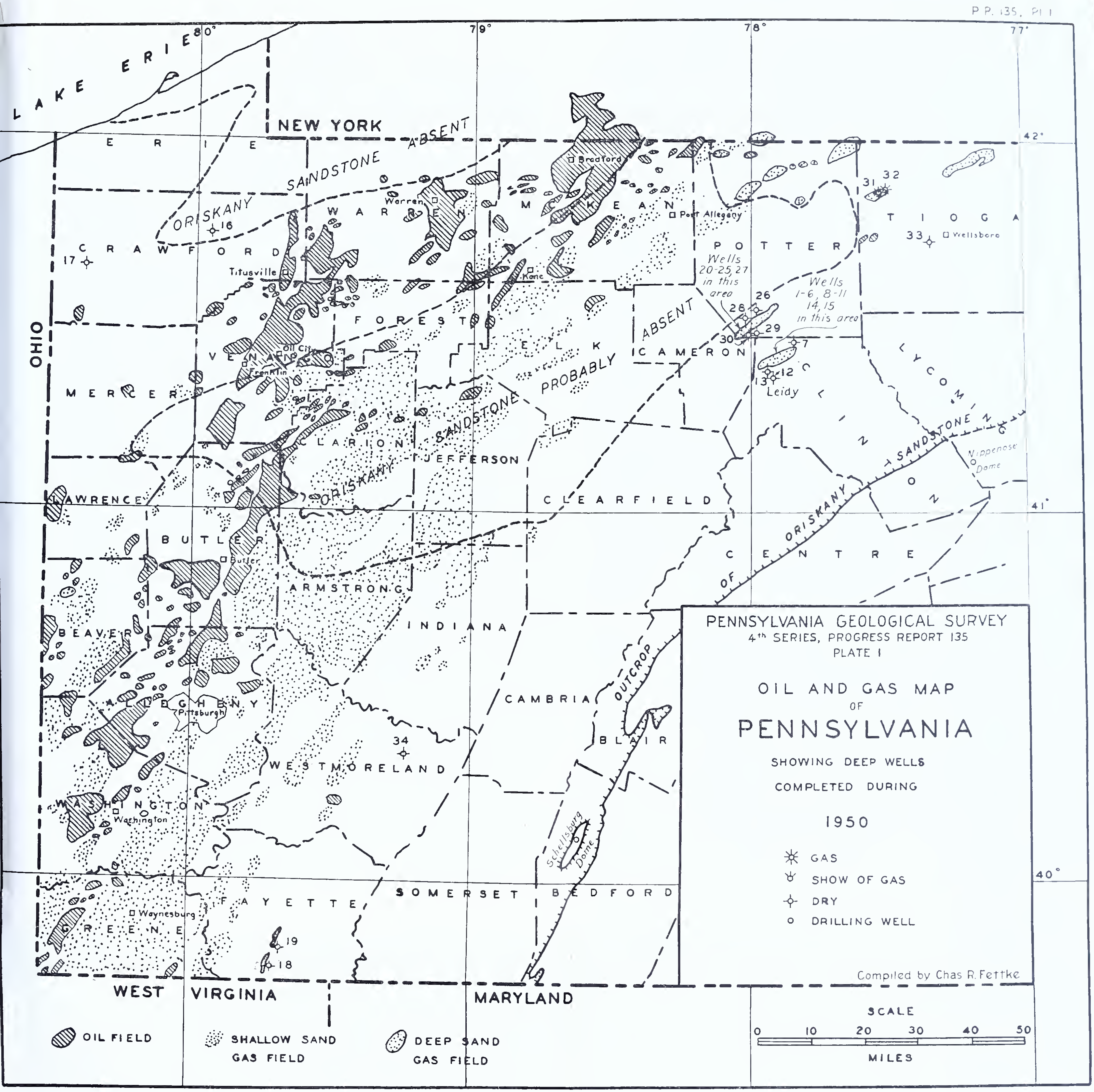
Table 7(2)

COUNTY		Clinton	Clinton	Clinton	Clinton	Clinton	Clinton	Crawford	Crawford	Crawford
MAP NUMBER		10	11	12	13	14	15	16	17	18
NAME OF WELL		H. V. Proctor 1	Orlan Repetto 1	Earl Summerson 1	Howard Summerson 1	Wm. Summerson 1	Alice B. Wykoff	Harry F. White	Guy Green 1	N. E. Murphy 1
OPERATOR		New York State Nat. Gas	Godfrey L. Cabot Inc	Fairman & Miller	Hopkins & Layton	C.E Fralich & Associates	C.E. Fralich & Associates	Geo. W. Bean & Harry F. White	G. J. Johnston	Orville Eberly et al.
TOWNSHIP		Leidy	Leidy	Leidy	Leidy	Leidy	Leidy	Richmond	Summit	Georges
LATITUDE		0.39 mi. S. 41°25'	0.97 mi. S 41° 25'	2.17 mi S. 41°25'	1.79 mi. S 41°25'	1.18 mi. N. 41°25'	0.24 mi. S. 41° 25'	0.37 mi. S. 41° 45'	1.18 mi. S. 41° 40'	1.17 mi. N. 39° 45'
LONGITUDE		0.09 mi W 77° 55'	0.45 mi W 77° 55'	0.26 mi W 77° 55'	0.75 mi. W. 77° 55'	151 mi E 77° 55'	0.46 mi. W. 77° 55'	1.77 mi. W. 79° 55'	1.25 mi. E. 80° 25'	1.93 mi E. 79° 45'
DATE COMPLETED		11-14-50	12-12-50	10-3-50	11-2-50	9-19-50	11-2-50	Shut down 1-1-50	4-28-50	10-12-50
ELEVATION		1123	1136	958	897	1292	869	1270	1110	2560
BEREA-CORRY										
MURRYSVILLE										
TULLY		5098-5204	5011-5130	5051-	5082-5198	5497-5606	5005-	2814-2898	2485-	7212-7320
ONONDAGA		5878-	5824-5842	5842-	5942-	6279-6294	5788-	3026-	2635-	Top chert 7767- 27 MCF gas 7790
ORISKANY		5899- Gas at 5900	5842 Gas at 5843	5853-5885 Salt water 5856	5955- Salt water 5957	6294- Gas 6295-6303	5810- First gas 5810	Oriskany horizon 3208 no sandstone	2831- Salt water 2833	7914-7977
SALINA								Salt 3467- Salt 3640-		
LOCKPORT								Black salt water 4100 ft. rose 3000 ft.		
ALBION	RED MEDINA (GRIMSBY)							4297-		
	WHITE MEDINA (WHIRLPOOL)									
QUEENSTON										
TOTAL DEPTH		5900	5843	5889	5957	6303	5826	4300	2833	8032
DEEPEST FORMATION TESTED		Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Lockport	Oriskany	Oriskany
RESULT		I.O.F. 12,000 MCF R.P. 3550 psi in 24 hrs.	I.O.F. 30,000 MCF. R.P. 3,600 psi in 1½ hrs.	3 bailers salt water in 12 hrs. Salt water rose	Too much salt water to bail	I.O.F. 3800 MCF R.P. 4050 psi in 14 hrs.	3000 MCF gas no increase after shot after 36 hrs.	Shut down due to	Salt water in Oriskany rose 1000 ft.	Show of gas in Onondaga

COUNTY		Fayette	Potter	Potter	Potter	Potter	Potter	Potter	Potter	Potter
MAP NUMBER		19	20	21	22	23	24	25	26	27
NAME OF WELL		Indian Creek Coal & Coke Co. 3	Walter Deibler Estate 2	C. L. Long 1	Robert Lyman 1	C. R. Peters 1	C. R. Peters 2	Kathryn M. Page 2	State of Penna 5	State of Penna. 17
OPERATOR		Wm. E. Snee et al	C.E. Fralich & Associates	Godfrey L. Cabot Inc.	R. L. Christman et al	C. E. Fralich & Associates	C. E. Fralich & Associates	Godfrey L. Cabot Inc.	Godfrey L. Cabot Inc.	Godfrey L. Cabot Inc.
TOWNSHIP		Wharton	Wharton	Wharton	Wharton	Wharton	Wharton	Wharton	Wharton	Wharton
LATITUDE		1.77 mi. S 39°50'	0.24 mi S 41°30'	0.02 mi N. 41°30'	0.52 mi. N. 41°30'	0.57 mi. N. 41°30'	0.82 mi N. 41°30'	On 41°30'	2.33 mi N. 41°30'	0.98 mi S. 41°30'
LONGITUDE		0.93 mi. W. 79°40'	2.06 mi. W. 78°00'	1.94 mi. W. 78°00'	0.82 mi. E 78°00'	0.72 mi. W. 78°00'	0.45 mi. W. 78°00'	1.40 mi. W. 78°00	1.39 mi. E. 78°00'	0.59 mi. W. 78°00'
DATE COMPLETED		6-2-50	12-7-50	7-6-50	6-23-50	12-15-50	1-3-51	2-10-50	1-10-50	3-23-50
ELEVATION		2615	1040	1042	1900	1610	1871	1518	1511	1849
BEREA-CORRY										
MURRYSVILLE										
TULLY		6326-6410	4662-4740	4655-	5350-5428	5104-5186	5390-	5045-	5171-5241	5377-5462
ONONDAGA		6694- Top chert 7012 Show gas 7193-96	5354-5365	5355-	6024-6046	5786-	6050-6062	5771-	5890-5898	6061-
ORISKANY		7306-7395	5365- First gas 5372	5367- Gas 5377-5379	6046- Gas 6054	5811 Gas 5817-5821	6062- Gas 6065-6070	5798-	5898-5932 Show gas 5910 Salt water 5915	6076 First gas 6090
SALINA										
LOCKPORT										
ALBION	RED MEDINA (GRIMSBY)									
	WHITE MEDINA (WHIRLPOOL)									
QUEENSTON										
TOTAL DEPTH		7588	5382	5379	6063	5826	6077	5821	5938	6104
DEEPEST FORMATION TESTED		Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany
RESULT		2 MCF gas and a little salt water in Onondaga Abandoned after shooting and acidizing	I.O.F. 1860 MCF at 5376 R.P. 2875 psi in 36 hrs. 2700 MCF after shot	I.O.F. 1181 MCF R.P. 3100 psi.	I.O.F. 1000 MCF 3,500 MCF after shot R.P. 1065 psi	I.O.F. 800 MCF in Oriskany 1250 MCF after shot R.P. 1200 psi in 12 hrs.	I.O.F. 500 MCF 830 MCF after shot	I.O.F. 750 MCF before shot 1235 MCF after shot R.P. 2375 psi	Show of gas at 5910 and 2 bailers salt water in 10 hrs at 5915 Abandoned	I.O.F. 327 MCF Shot 6090-6100 with 20 qts. 2742 MCF after shot R.P. 1300 psi in 60 hrs.

Table 7(4)

COUNTY		Potter	Potter	Potter	Tioga	Tioga	Tioga	Westmoreland		
MAP NUMBER		28	29	30	31	32	33	34		
NAME OF WELL		State of Penna. 18	State of Penna. 19	Kathleen Stevens et al 1	J. L. Trimmer 1	J. L. Trimmer 1	Harry Benauer 1	Camilla F Giffin 4		
OPERATOR		Godfrey L Cabot Inc.	Godfrey L. Cabot Inc.	Appalachian Dev.	New York State Nat. Gas	New York State Nat. Gas	Wm. E Snee et al	Peoples Natural Gas		
TOWNSHIP		Wharton	Wharton	Wharton	Clymer	Clymer	Delmar	Derry		
LATITUDE		1.49 mi N. 41°30′	0.62 mi. S. 41°30′	1.28 mi S. 41°30′	2.28 mi N. 41°50′	2.53 mi. S 41°55′	1.46 mi. S. 41° 45′	0.46 mi N. 40° 20′		
LONGITUDE		0.54 mi W. 78°00′	0.04 mi. E. 78°00′	1.62 mi W. 78°00	1.88 mi W. 77°30′	0.21 mi E 77° 30′	0.87 mi. W. 77° 20′	0.32 mi E 79° 15′		
DATE COMPLETED		7-6-50	7-14-50	6-16-50	4-1-50	8-18-50	2-24-50	6-5-50		
ELEVATION		1756	2253	2171	1745	1610	1784	2238		
BEREA-CORRY										
MURRYSVILLE										
TULLY		5372-5445	5711-5793	5754-5852	3570-	3477-3530	4658-4744	6445-6499		
ONONDAGA		6075-6090	6400-	6439-6490	4330-	4255-4272	5613-5638	7228-7392 Top chert 7258 8964-9163 Top chert 9006		
ORISKANY		6090- Salt water and show gas 6106-6106	6422- Gas 6427-6434 A little S.W. 6431-34	6490-6514 Show gas and a little SW 6507	4347-4372 Gas	4272-4303 Gas 4274-86	5638-5676	7392-7457 9163-		
SALINA										
LOCKPORT										
ALBION	RED MEDINA (GRIMSBY)									
	WHITE MEDINA (WHIRLPOOL)									
QUEENSTON										
TOTAL DEPTH		6106	6434	6525	4398	4314	5683	9200		
DEEPEST FORMATION TESTED		Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany	Oriskany		
RESULT		I.O.F. 103 M.C.F. Salt water rose 200 ft.	I.O.F. 1800 MCF Salt water R.P 1000 psi	I.O.F. 7 MCF 80 MCF after shot R.P. 1260 psi	Gas Storage Well	Gas Storage Well	No oil, gas or salt water in Oriskany	Dry hole		



PENNSYLVANIA GEOLOGICAL SURVEY
4th SERIES, PROGRESS REPORT 135
PLATE I

OIL AND GAS MAP OF PENNSYLVANIA

SHOWING DEEP WELLS COMPLETED DURING

1950

Compiled by Chas R. Fettke